

Unit 6: Using Libraries

Extend the functionality of your site by using libraries of classes and functions.

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Overview

 Unit 6 is worth 10% of your portfolio grade

Podcast - Introduction to Unit 6

In this unit we will be greatly extending the functionality of your site by using libraries of classes and functions written by someone else. By default we will be making use of a particularly popular set of libraries known as JQuery although you are welcome to explore other libraries if you wish. However, we may not be able to support you if you choose to do so.

JQuery contains a huge range of classes and functions that make it easier to do many things, from elegant drop-down menus, to rich text editing, to pop-out calendars, to drag-and-drop objects, to media playing, and a whole lot more. Why write your own when someone else has done it for you? JQuery is used in many advanced sites around the world and on many systems such as social networking, content management and learning management systems.

Learning to use JQuery is akin to learning a new language in itself. You will be using notably higher-level objects than those provided natively by JavaScript, but the principles are the same, and the complexity is significant.

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Learning Outcomes

When you have completed this unit, you should be able to use JavaScript libraries (e.g. ,jQuery) to create dynamic pages.

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using particles.js instead

Problem

Add dynamic content to your page using the JQuery library that satisfies the requirements identified in Unit 1 and developed since then.

You may, if you wish, use the library to replace work that you have already done if JQuery allows you to achieve your goals more effectively or efficiently. Remember to ensure that we have a full record of the previous work you have done, however—add to your diary notes, but do not change or delete earlier entries.

You may, if you wish, use other libraries apart from JQuery if they suit your needs better, but no support will be provided for this. Note, also, that the JQuery core may be greatly extended through plug-ins that can do almost anything JavaScript is capable of. Feel free to use any plug-ins that suit your needs, or if you are really enjoying the process, extend those that already exist, or write your own.

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Process Guide

Important: do not begin this task until you have completed Unit 5, including the learning diary.

Download the JQuery core libraries from [JQuery.com](#), [Microsoft](#), or [Google](#). It is possible to call the code directly from those sites, thereby ensuring an up-to-date implementation, but we recommend creating a local copy so that you are in control of the code, and, should the libraries change or be removed, your code will still work. You may want to ponder the advantages and disadvantages of both approaches and reflect on them in your learning diary—it would show a good critical and reflective attitude!

Note that JQuery can be extended with a very wide range of plug-ins, so you will likely find yourself downloading one or more files in addition to the core as you work your way through this exercise.

If you have not already done so (if not, you probably should!), create a directory called “scripts” as a subdirectory of your code directory for this course. Add the JQuery library to that directory. You may want to rename it at this point if it is not already called “jquery.js”—typically, you will find the version you download defaults to including the version number. There is no logical harm in using this, apart from when there is a minor update with a different name, in which case you will need to make changes to your code or give the file an illogical and misleading name.

Learn how to use JQuery by following tutorials provided (or find your own and share them). As always, if you run into difficulties you cannot solve on your own, use the forums to ask for help.

You will find that JQuery and its plugins offer a huge range of opportunities and possibilities to modify your code. As you go through the tutorials, Identify ways that JQuery might be used on your site, bearing in mind (as ever) the scenarios and personas developed in and since Unit 1.

Bear in mind that some of the possibilities depend on other things that may not be available to you—beware of being over-ambitious at first. This is particularly true of AJAX calls, where a server-side file is called for that you may not have access to.

Bear in mind also that you should not introduce elements that will confuse the end user (unless that is the explicit purpose), and changes to one page may therefore entail changes to others.

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Identify any extra JQuery plug-ins you might need: JQuery is a highly extensible system for which many add-ins have been created. Feel free to use them! Do make sure that they are trustworthy and well written—by now you should have some idea what to look for, but you are advised to run a quick search for the plugin